

Boeing's 787 Dreamliner

Boeing's Dreamliner is an international collaboration with partners in Asia, Europe and the United States. Once the airframe structures are built they are flown to Boeing's Everett factory in Washington, where final "snap-together" assembly takes just three days. The 787 is the world's first large airliner with an airframe made of carbon-fibre composite rather than aluminium

▶ **Passenger cabin:** Sweeping ceiling arches create feeling of openness

Air quality: Advanced air-conditioning system removes ozone from outside air.
HEPA (high efficiency particulate arrestor) filters remove bacteria, viruses and fungi, along with odours and other contaminants

Crew rest areas: Forward and aft rest areas in fuselage crown, above passenger cabin, free up room for additional capacity in cargo compartment

Cabin pressure: Stronger composite body allows higher cabin pressure than most airliners. This helps breathing and reduces risk of dehydration and headaches associated with jetlag and airsickness

Windows: Electrochromic glass dims automatically like panchromatic sunglasses. No window shades required

Gust-suppression system: Improves ride quality during turbulence. Boeing says technology reduces motion sickness by almost 90%

Raked wingtips: Optimal for long-haul flights

Engines: Choice of **General Electric GENx** or **Rolls-Royce Trent 1000** engines; 20% more fuel efficient and 25% quieter than comparable midsize airliner

▶ **Flight deck:** First airliner with HUDs (head-up displays)

Mood lighting: Light-emitting diodes used instead of fluorescent tubes. 128 colour combinations can create gentle ambience, such as sunrise, as passengers awake from long flight

821 orders from 56 customers
Price: \$200m per plane

Dreamliner family
787-3 Seats: 290 (2 classes)
Range: 4,650-5,650km
Price: \$150-155.5 million

787-8 Seats: 250 (3 classes)
Range: 14,200-15,200km
Price: \$161-171.5 million

787-9 Seats: 290 (3 classes)
Range: 14,800-15,750km
Price: \$194-205.5 million

Configuration:
Wing span: 60 metres (197 feet)
Length: 63 metres (206 feet)
Height: 17 metres (56 feet)
Cruise speed: Mach 0.85 (1,040km/h, 650mph)

Composites	50%	Aluminium	20%	Titanium	15%	Steel	10%	Other	5%
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Boeing uses outside suppliers to fabricate about 70% of the Dreamliner as opposed to 51% for existing planes



United States: Nose section, rear fuselage, vertical fin

Italy: Mid fuselage, horizontal stabilizer



Japan: Wings, wingbox, forward fuselage

Australia: Inboard flaps, movable trailing edges



South Korea: Wing tips, tail cone

China: Rudder, vertical fin leading edge



Sweden: Cargo doors

France: Passenger doors, landing gear parts



UK: Landing gear parts

Canada: Landing gear, gear doors, aft pylon and wing to body fairings

